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Case Report

An unusual case of patellar dislocation

A Case Report and literature review

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CASE REPORT We present a case of a 57 year old female whose patella became locked above a femoral osteophyte. She attended A & E at the Royal Victoria Hospital, Belfast. She had been pushing a chair forward under a table with her left knee when she felt a 'pop' inside it followed by severe pain. She was unable to bend or weightbear on the knee. Her left knee was previously asymptomatic with no recent trauma. She had a right knee arthroscopy and trimming of medial meniscus three years ago.

On examination the left knee was locked in full extension. There was a moderate sized effusion and the left patella was positioned higher than its counterpart. There was a prominent vertical sulcus immediately below the inferior pole of the left patella extending towards the tibial tuberosity. On palpation there was pain around the inferior pole of patella and overlying the patellar tendon. She could not actively straight leg raise. Active and passive knee flexion caused severe pain. Examination of collateral and cruciate ligaments was not possible due to inability to flex the knee. The knee lacked the typical boggy swelling of a true patellar tendon rupture but this was the clinical diagnosis.

Radiographic investigation demonstrated a high-riding patella on A-P view. The lateral view showed an osteophyte on the inferior margin of the patellar articular surface locked over an osteophyte on the superior aspect of the femoral articular surface (Fig. 1). The patella could no longer track freely downwards, explaining the patient's symptoms.

Reduction was easily achieved under intravenous analgesia. The limb was flexed at the hip by supporting the heel causing a relative hyperextension at the knee. The interlocking osteophytes of patellar and femoral articular

Fig 1. Lateral radiograph of knee demonstrating interlocking osteophytes of patellar and femoral articular surfaces.

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surfaces spontaneously disengaged and the patella reduced to its anatomical position. Pain was relieved, active flexion of the knee to 100 degrees was possible, the patella tracked normally, and straight leg raising returned. A radiograph confirmed the reduction (Fig. 2). The patient was then treated with a soft knee support and physiotherapy. Normal function returned in three months.

Fig 2. Lateral radiograph of knee showing reduced dislocation of patella.

DISCUSSION

A dislocated patella is a common clinical problem in A & E departments. Lateral dislocation is most frequent although medial, inferior and intra-articular dislocations have also been described. Superior dislocation of the patella is a rare and potentially confusing condition. The clinical differentiation between superior dislocation and the more common patellar tendon rupture can be difficult. Both conditions present with an acutely painful swollen knee. Clinical findings are similar; high-riding patella, inability to straight leg raise, pain localised to the infrapatellar area and reluctance to flex the knee. The differential diagnostic sign is the typical boggy infrapatellar swelling of patellar tendon rupture compared with the vertical infrapatellar sulcus of superior patellar dislocation. Radiographs of the knee are mandatory to make the diagnosis and eliminate the possibility of unnecessary surgical intervention in patients with superior dislocation of the patella.

Superior dislocation has been reported four times in the past;[1-4] three out of four cases have been elderly females with early degenerative changes present in the knee joint. The mechanism of injury is a direct upward force to the anterior aspect of patella associated with quadriceps contraction with the knee in a semi-flexed position. The patella tracks to the top of the patello-femoral joint. The presence of an osteophyte on the inferior pole of the patellar articular surface and on the superior articular margin of femoral condyle permits the interlocking of the two surfaces. Reduction may require intravenous analgesia, sedation or general anaesthetic and is achieved with the minimum of manipulation. Return of function is rapid, reported as being between four and seven weeks following injury.[3,4] There has been one case of recurrent dislocation.[2] Recurrence may require surgical intervention by cheilectomy.

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